

CLAIMS

What is claimed is:

1. An information storage medium comprising a user data area, wherein information about the user data area, where user data is recorded, is recorded in at least one of an area right before and an area right after a basic recording unit of the user data area.
2. The information storage medium of claim 1, wherein the basic recording unit of the user data area is one of a physical cluster, an error correction code (ECC) block, a sector, and a frame.
3. The information storage medium of claim 2, wherein the information about the user data area is recorded in at least one of a run-in area and a run-out area that are right before and after the physical cluster, respectively.
4. The information storage medium of claim 3, wherein:
the information storage medium has at least two information storage layers, and
the information about the user data area is recorded in at least one of the area right before and the area right after the basic recording unit of the user data area in different patterns for the different information storage layers.
5. The information storage medium of claim 3, wherein the information about the user data area is recorded using addresses.
6. The information storage medium of claim 3, wherein the information about the user data area is storage layer information.
7. The information storage medium of claim 6, wherein the storage layer information is recorded using addresses.

8. The information storage medium of claim 1, wherein:
the information storage medium has at least two information storage layers, and
the information about the user data area is recorded in at least one of the area right
before and the area right after the basic recording unit of the user data area in different patterns
for the different information storage layers.

9. The information storage medium of claim 1, wherein the information about the
user data area is recorded using addresses.

10. The information storage medium of claim 1, wherein the information about the
user data area is storage layer information.

11. The information storage medium of claim 10, wherein the storage layer
information is recorded using addresses.

12. A method of recording and/or reproducing data on an information storage
medium having a user data area, the method comprising:

reading information about the user data area, where user data is recorded, from at least
one of an area right before and an area right after a basic recording unit of the user data area;
and

recording and/or reproducing the data based on the information about the user data
area.

13. The method of claim 12, wherein the basic recording unit of the user data area is
one of a physical cluster, an error correction code (ECC) block, a sector, and a frame.

14. The method of claim 13, wherein the information about the user data area is
recorded in at least one of a run-in area and a run-out area that are right before and after the
physical cluster, respectively.

15. The method of claim 13, wherein:
the information storage medium has at least two information storage layers, and
the information about the user data area is recorded in at least one of the area right
before and the area right after the basic recording unit of the user data area in different patterns
for the different information storage layers.
16. The method of claim 13, wherein the information about the user data area is
recorded using addresses.
17. The method of claim 13, wherein the information about the user data area is
storage layer information.
18. The method of claim 17, wherein the storage layer information is recorded using
addresses.
19. The method of claim 12, wherein:
the basic recording unit of the user data area is a physical cluster, and
the information about the user data area is recorded in at least one of a run-in area and
a run-out area that are right before and after the physical cluster, respectively.
20. The method of claim 12, wherein:
the information storage medium has at least two information storage layers, and
the information about the user data area is recorded in at least one of the area right
before and the area right after the basic recording unit of the user data area in different patterns
for the different information storage layers.
21. The method of claim 12, wherein the information about the user data area is
recorded using addresses.
22. The method of claim 12, wherein the information about the user data area is
storage layer information.

23. The method of claim 22, wherein the storage layer information is recorded using addresses.

24. The information storage medium of claim 1, wherein the information storage medium is a recordable information storage medium.

25. The information storage medium of claim 1, wherein the information storage medium is a reproduction-only storage medium.

26. The information storage medium of claim 1, wherein the information storage medium is one of recordable and reproduction-only optical discs.

27. The information storage medium of claim 2, wherein the information about the user data area is recorded using one or more addresses of the ECC block.

28. The information storage medium of claim 3, wherein the information storage medium is a reproduction-only storage medium.

29. The information storage medium of claim 3, wherein each of the information storage layers includes a lead-in area, a lead-out area and the user data area.

30. The information storage medium of claim 4, wherein the different patters are one of different consecutive patterns of identical intervals and different patterns of different sized intervals.

31. The information storage medium of claim 8, wherein the different patters are one of different consecutive patterns of identical intervals and different patterns of different sized intervals.

32. A method of operating a storage medium having a user data area, the method comprising:

accessing information about the user data area, where user data is recorded, from at least one of an area right before and an area right after a basic recording unit of the user data area; and

operating the storage medium based on the accessed information.

33. The method of claim 32, further comprising recognizing a layer of the storage medium based on the accessed information, wherein the operating of the storage medium includes recording and/or reproducing data with respect to the layer.

34. The method of claim 33, wherein the recognizing of the layer comprises recognizing the layer in response to the accessed information belonging to a predetermined group of addresses.

35. The method of claim 32, further comprising identifying a desired layer of the storage medium based on ranges to which the accessed information belongs.

36. The method of claim 35, wherein the identifying of the desired layer comprises: recognizing a storage layer of the storage medium as the desired layer in response to the accessed information belonging to a predetermined range; and

in response to the accessed information not belonging to the predetermined range, accessing another storage layer of the storage medium so as to determine whether accessed information thereof belongs to the predetermined range.

37. The method of claim 36, wherein the operating of the storage medium includes recording and/or reproducing data with respect to the desired layer.

38. The method of claim 32, further comprising identifying storage layers of the storage medium, wherein the identifying of the storage layers comprises:

recognizing a first layer of the storage layers in response to the accessed information belonging to a first predetermined range;

in response to the accessed information not belonging to the first predetermined range, accessing a second layer of the storage layers so as to determine whether accessed information thereof belongs to a second predetermined range;

recognizing the second layer of the storage layers in response to accessed information thereof belonging to the second predetermined range; and

in response to the accessed information of the second layer not belonging to the second predetermined range, accessing another layer of the storage layers so as to determine whether accessed information thereof belongs to the second predetermined range.